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EXAMINER

GRENDZYNSKI, M

ART UNIT

PAPER NUMBER

1774

DATE MAILED:

09/07/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/281,809

Applicant(s)

Liu et al.

Examiner

Grendzynski, Michael E.

Group Art Unit

1774

☒ Responsive to communication(s) filed on Mar 31, 1999

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-18 and 23-26 is/are pending in the application

Of the above, claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-18 and 23-26 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

Art Unit: 1774

DETAILED ACTION

Claim Rejections - 35 U.S.C. § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 5-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 5, how does the adhesive differ from the water dispersible resin? A binder, by its nature adheres, thus is considered an "adhesive." Does applicant intend to claim that the layer
Presently, the use of the term "substantially" renders the claim ambiguous. The term is neither defined in the specification, nor does it have a well-defined meaning in the art. At what point does the distribution curve "substantially lie" in the pore diameter range? 3 nm? 20 nm? If the peak is outside this range, would the trough "substantially lie" within the range?
3. Claim 7 recites the limitation "the laminate" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 U.S.C. § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

Art Unit: 1774

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Mimura. Applicants claim an ink jet recording material comprising a recording layer containing colloidal particles and a water-soluble binder, wherein a peak of the pore distribution curve of the particles in the layer lies within the range of 2 to 100 nm. Mimura discloses a surface porous film comprising a base film and a porous layer. *See* col. 1, lines 52-56. The porous film is equivalent to applicants' recording layer--it comprises a binder and colloidal silica, and has peak pore diameter within applicants' claimed range. *See* col. 3, lines 50-59 and col. 4, lines 57-58.

Claim Rejections - 35 U.S.C. § 103

6. Claims 1-9, 12, 14, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mimura. Applicants claim an ink jet recording material comprising a recording layer containing colloidal particles and a water-soluble binder, wherein a peak of the pore distribution curve of the particles in the layer lies within the range of 2 to 100 nm. Mimura discloses a surface porous film comprising a base film and a porous layer. *See* col. 1, lines 52-56. The porous film is equivalent to applicants' recording layer--it comprises a binder and colloidal silica, and has peak pore diameter within applicants' claimed range. *See* col. 3, lines 50-59 and col. 4, lines 57-58. With regard to claims 4-6, it is obvious to provide additional layers--more than one coating of any given layer--as it amounts to only routine skill in the art. That is, mere duplication of parts has no patentable significance unless a new and unexpected result is produced. *In re Harza*, 274 F.2d 669, 124 USPQ

Art Unit: 1774

378 (CCPA 1960). It would have been obvious to one of ordinary skill in the art at the time of the invention to add a second coating of the Mimura ink receptive layer to the substrate. Once done, a layer equivalent to applicants' interlayer is formed--it comprises an acrylic monomer (i.e., and adhesive) with colloidal silica and alumina particles within applicants claimed pore range distribution. *See* col. 5, line 17 through col. 6, line 20.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-18 and 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto. Miyamoto discloses an ink jet recording sheet comprising a support and one or more ink receptive layers thereon. *See* col. 3, lines 1-7. The one or more ink receptive layers is equivalent to applicants' one or more ink receptive layers--they comprise a binder (e.g., polyvinyl alcohol) and a colloidal silica. *See* col. 4, lines 36-68 and col. 7, line 4. The peak pore distribution, when converted, falls within applicants' claimed range. *See* FIG. 3 and col. 6, lines 24-39.

With specific regard to claim 5, Miyamoto discloses that the ink receptive layer comprises an adhesive. *See* col. 4, lines 64-67.

With specific regard to claims 7, 9, 10, Miyamoto discloses that the ink jet recording sheet further comprises an interlayer which, in turn, comprises an adhesive. *See* col. 6, lines 40-46; col. 7, lines 1-25; and col. 8, lines 10-18. Also with respect to claim 7, the patentability of a product does

Art Unit: 1774

not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 227 USPQ 964, 966.

With specific regard to claim 10, Miyamoto discloses that the uppermost ink receptive layer comprises a pigment in the amount claimed by applicant, *see* col. 11, line 66 through col. 12, line 15 and col. 7, lines 18-26.

With specific regard to claim 11, *see* examples 7 to 12 (the particle diameter of the lower layer is greater than that of the pigment in the upper layer, and the pigment size of the lower layer is within applicants’ claimed range).

With specific regard to claim 13, Miyamoto discloses a particle size of the colloidal silica of the upper layer is within the claimed range. *See* col. 5, line 46 thorough col. 6, line 39.

With specific regard to claim 14, Miyamoto discloses the use of Snowtex OL, a known cationic silica, which is used by applicant in, *inter alia*, Example II-1. *See* Miyamoto Example 1. It would be obvious to one of ordinary skill in the art to use the same pigment source in any or all of the layers of the Miyamoto ink jet recording sheet.

With specific regard to claims 15-16, Miyamoto discloses the use of PVA 117, produced by Kururay Co. *See* Example 1. This is identical to the polyvinyl alcohol used by applicants in the examples (e.g, Example II-1). It is inherent that the PVA possesses the claimed saponification and polymerization values. In the alternative, the experimental modification of this prior art in order to

Art Unit: 1774

ascertain optimum operating conditions (the saponification and polymerization values) fails to render applicant's claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233.

With specific regard to claim 18, Miyamoto discloses a particle diameter of the pigment within applicants' claimed range. *See* col. 5, lines 46-54.

With specific regard to claims 24-26, "[t]he patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 227 USPQ 964, 966. Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). *See* MPEP §2113.

9. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto and Snowtex Product Information. Miyamoto discloses that among the pigments that may be used include alumina and colloidal silica (e.g., Snowtex OL). *See* col. 5, lines 54-67 and Example 1. Snowtex product information teaches that Snowtex OL--one of the types of colloidal silica used by both Miyamoto and applicants--is acidic. *See* SNOWTEX product bulletin.

Art Unit: 1774

Conclusion


10. Should you have any questions concerning this communication, please direct them to Michael E. Grendzynski at telephone number (703) 305-0593. The examiner can be reached at this number from 7:00 a.m. to 3:30 p.m. Monday-Friday. If attempts to reach the examiner by telephone prove unsuccessful, the examiner's supervisor, William Krynski, can be reached at (703) 308-2376. Please allow the examiner twenty-four hours to return your call.

A facsimile center has been established for Group 1700 on the 8th floor of Crystal Plaza 3. The hours of operation are Monday through Friday, 8:45 am to 4:45 pm. The fax numbers for Art Unit 1774 are (703) 305-3599 for official after final faxes, and (703)305-5408 for all other official faxes. Use of the Group 1700 center will facilitate rapid delivery of materials to examiners in Art Unit 1774.

Any inquiry of a general nature, or those relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 308-2351.



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September 1, 2000